

# ***Superior Design – Definitions & General Benchmark Guidance*** ***(updated 12-17-15)***

## **I. Definitions:**

Benchmark Guidance: A standard in measuring, judging quality and presented herein to serve as advice or assistance. (alternative solutions may provide sufficient)

Conservation Landscaping: Defined in the Zoning Ordinance as plantings that are suited to the site conditions (sun exposure, soil moisture, soil pH, and soil type) native to the region, and emulate a specific habitat (woods, wetland, or meadow).

Renewable Energy: The use of on site, non-polluting energy generally used to offset building energy costs including solar, wind, geothermal, low-impact hydro, biomass and bio-gas strategies.

Superior Design: A development project that demonstrates optimal land use planning and contains a combination of elements which exceed the requirements for a conventional subdivision. (Note: Staff would expect at least 70% verification of applicable criteria in order to support consistency that the project is of superior design).

Water Reuse: Activity that uses non-potable water such as captured rainwater, recycled wastewater, recycled greywater, or water treated and conveyed by a public agency specifically for non-potable uses and/or for irrigation.

## **II. Clarifying Criteria:**

### **APPENDIX I: SUPERIOR DESIGN CRITERIA FOR CLUSTER DEVELOPMENTS AND PLANNED DEVELOPMENT ZONES**

**[Added 4-23-2010 by Bill No. 2010-06]**

#### **Superior Design**

When creating or evaluating a project for Superior Design, the following criteria shall be used and applied to the project whenever possible, or as applicable:

- A. Rural Development Project Criteria:** A rural development project that is superior in design demonstrates optimal land use planning and contains a combination of the following elements which exceed the requirements for a conventional subdivision:

**1) The Proposed Open Space:**

- a) **Exceeds the amount required by this Chapter and includes areas not already protected by this Chapter;**

*Benchmark Guidance:*

- *Consider a minimum percentage by which to exceed required Open Space. Examples of recently proposed “surplus” Open Space have included .08 acres and .13 acres*
  - *Consider a minimum ratio of usable, upland Open Space to Open Space containing steep slopes (15% or greater), wetland buffers, RPZ, etc. (**Note:** The Zoning Ordinance 297-223 currently allows “Up to 50% of the required cluster open space may be designated on floodplains, nontidal water bodies or nontidal wetlands if the cluster open space includes a hiker/equestrian trail system or other passive recreational area approved by the Planning Commission.”*
- b) **Connects to other adjacent open space areas which are at least 10,000 square feet in size, and can serve as wildlife corridors in accordance with Maryland’s Green Infrastructure Guidelines; or**

*Benchmark Guidance:*

- *The “other” adjacent Open Space areas should be off-site to qualify.*
  - *Consider reference to “Maryland’s Green Infrastructure Guidelines” or reference the Charles County Land Preservation or Protected Lands areas map when applicable.*
- c) **Includes landscaped areas and clearly defines maintenance responsibilities.**

*Benchmark Guidance:*

- *Landscaped areas should include supplemental plantings and the maintenance for these plantings included in the HOA documents.*

**2) The Forest Conservation design exceeds the County’s and the Chesapeake Bay Critical Area Program requirements, including planting and mitigation standards;**

*Benchmark Guidance:*

- *Exceed requirements by 10% or greater to qualify. Forest preserved to meet other requirements of the Zoning Ordinance and Forest Conservation Ordinance, including, but not limited to, mitigation for abandonment of easements, must be subtracted from the calculation of forest preserved when determining whether a project is superior.*
  - *Exceed requirements by 10% or greater to qualify. Plantings within the Critical Area to meet other requirements of the Zoning Ordinance must be subtracted from the calculation of proposed plantings when determining whether a project within the Critical Area is superior.*

**3) The proposed agricultural use lots, if any, contain one or more of the following elements:**

**a). Lots which are greater than 25 acres and contain more than 50% Class I- IV soils as classified by the United States Department of Agriculture Natural Resources Conservation Service;**

*Benchmark Guidance:*

- *Soil class category is determined by the Non-Irrigated Capability Class (See Soil Conservation District map data)*
  - *Have 20% greater acreage than the minimum 25 acre agricultural use lot to be a superior project. This would be a 30 acre lot.*

**b). Lots which maximize the use of existing agricultural infrastructure (such as barns, silos, equipment storage areas) and cleared or existing crop-land; or**

*Benchmark Guidance:*

- *A superior design incorporates existing structures into a development for various purposes, including their scenic qualities or community amenities. If the property does not include existing structures, this may be marked as “non-applicable.”*

**c). Lots where the primary use of an agricultural use lot is forestry, the lot contains productive soils for silviculture and is of sufficient size and design that is viable for forest harvest operations as determined by a qualified state licensed forester.**

*Benchmark Guidance:*

- *The lot should either contain 75% productive soils for silviculture or a Forest Management Plan will be provided by the applicant, to the Planning Division, for the forested area prior to approval of a final plat for this lot.*

**4) The proposed development includes shared pedestrian and bicycle facilities and bike racks where desired or applicable;**

*Benchmark Guidance:*

- *The proposed development must include a trail suitable for both pedestrian and bicycle use, and include bike racks to meet the intent of this criterion.*

**5) The proposed development includes a trail system within and connecting open space or roads to adjacent properties, or alternatives such as mowed grass or pervious concrete, and signage provided at trail heads and along trails;**

*Benchmark Guidance:*

- *The proposed development should include a trail system within open space that either connects the open space to roads or adjacent properties or utilizes alternative materials such as mowed grass or pervious concrete, and signage must be provided at trail heads and along trails to meet the intent of this criterion.*

**6) The proposed development relies in the limited use of flag-shaped lots, while maintaining individual yard privacy and limiting clearing of individual building sites;**

*Benchmark Guidance:*

- *A maximum percentage of flag lots should be less than 15% in order to meet this criterion.*
  - *The Zoning Ordinance, Section 297-25(F) does not set regulatory limits to the number of flag/panhandle lots that may be proposed within a subdivision in the AC or RC zones. Recent examples of number/percentage of flag-shaped lots proposed are 6 out of 27 (22%), and 17 out of 62 (27%).*

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**7) The homes in the proposed development will have views of open space, not backs or sides of other homes;**

*Benchmark Guidance:*

- *The best way to comply with these criteria is to consider it up-front in the design process and the layout of access roads. Limiting the use of flag lots can sometimes help to achieve this objective.*

**8) The development demonstrates its commitment to environmental stewardship through the use of one or more of the following elements, including those items that may be non-applicable:**

**a) Conservation landscaping;**

*Benchmark Guidance:*

- *Conservation landscaping may include additional stormwater management best management practices (providing additional water quality treatment above the minimum required limits) designed to emulate wetland areas, provided that the conversation landscaping areas are appropriately located adjacent to Forest Conservation easements or RPZ's. This is implemented with specific conditions of approval and superior design notes for the plat and development services permit.*
  - *Another alternative would be to include at least 25% of lots with yards having conservation landscaping, provided that the conversation landscaping areas are appropriately located adjacent to Forest Conservation easements or RPZ's. A typical planting plan (or various options planting designs) should be presented for consideration.*

**b) Water re-use;**

*Benchmark Guidance:*

- Required stormwater management best management practices, with the exception of green roofs, will not be considered water re-use mechanisms. Water re-use is only considered qualified only when cisterns and rain barrel systems for water re-use are being proposed without seeking ESD credit. Commitments to water re-use will be included in a condition of approval and superior design notes for the plat and development services permit as well as the individual building permits.

**c) Use of renewable energy, or other energy efficiency measures detailed in HOA covenants for private lots and/or community facilities;**

*Benchmark Guidance:*

- (see definition of renewable energy). If the applicant chooses to utilize renewable energy for this criterion, then renewable energy (i.e. solar power) must be used to provide power for at least one type of community element (i.e. lighting for entrance sign, etc.). If the applicant chooses to utilize energy efficiency measures for this criterion, then it must be demonstrated that energy efficiency measures will go above and beyond the current industry standard of Energy Star. Further, provisions for renewable energy and/or other energy efficiency measures shall be included in the HOA documents.

**d) Limited or no stream crossings or stream crossings, or**

*Benchmark Guidance:*

- *To be quantified as shown on the plan. A superior design is usually a subdivision that uses no more than one stream crossing. In addition, the overall stream crossing footprint must be minimized, including the use of retaining walls that eliminate graded side slopes. To be marked as non-applicable if no streams are present on the property.*

**e) Disturbance of steep slopes or other environmental features on lots are minimized.**

*Benchmark Guidance:*

- Steep slopes are defined differently based upon whether the project is within or outside of the Critical Area. Within the Critical Area, the Zoning Ordinance requires a variance prior to approval of development over slopes of 15% or more. Outside of the Critical Area, the Subdivision Regulations direct areas of slopes over 25% to be preserved as open space to the extent reasonable, as long as the engineer agrees to use “appropriate engineering measures concerning slope stability, erosion, and resident safety.”
  - A superior design limits any steep slopes on residential lots.
  - Outside of the Critical Area, no more than 10% of the lots less than or equal to one acre in size should include slopes greater than 15%, with no disturbance permitted to these slopes.
  - Other environmental features would include, but not be limited to, the resource protection zone, critical area Buffer, non-tidal wetlands

and their state required buffers, Tier II buffers, habitat protection measures approved under a habitat protection plan, which normally allow limited disturbance.

- A superior design does not include any environmental features on lots less than or equal to one acre in size.

**9) The proposed design ensures that pre-development views from existing roads and other scenic views are preserved;**

*Benchmark Guidance:*

- *The proposed design may include measures (i.e. bufferyards and/or scenic easements) to buffer and screen the proposed development in order to protect the view from existing roadways and other scenic viewsheds to meet the intent of this criterion. Bufferyards sizes may vary but existing vegetation shall be retained.*
  - *See Section 55 of the Subdivision Regulations regarding identification and protection of historic and scenic resources. Also, see “Context Sensitive Solutions Manual” produced by the Maryland State Highway Administration (<http://www.sha.maryland.gov/OED/CSS-3.pdf>).*
  - *Principles of Context Sensitive Solutions include: Identify, Preserve, Maintain and Enhancing Resources. Attention to issues early in the design process can help. Consider siting of housing or buildings; as well as transportation, utilities, landscaping, lighting, signage, access design in relation to the resource. Protection measures should be shown on the plan to meet this criteria for Superior Design.*
  - *See Appendix “J” of the Zoning Codes that stipulates historic and scenic road attributes.*

**10) The development minimizes impacts to or protects historic viewshed features, such as farm houses and farm roads, barns, fence lines, meadows, forests or farm land views from existing roads;**

*Benchmark Guidance:*

- *The proposed development may include measures (i.e. bufferyards and scenic easements) to buffer and screen the proposed development in order to protect the view from existing roadways and historic viewshed features to meet the intent of this criterion. Bufferyards sizes may vary but existing vegetation shall be retained.*

- See Section 55 of the Subdivision Regulations regarding identification and protection of historic and scenic resources. Also, see “Context Sensitive Solutions Manual” produced by the Maryland State Highway Administration (<http://www.sha.maryland.gov/OED/CSS-3.pdf>).
- Principles of Context Sensitive Solutions include: Identify, Preserve, Maintain and Enhancing Resources. Attention to issues early in the design process can help. Consider siting of housing or buildings; as well as transportation, utilities, landscaping, lighting, signage, access design in relation to the resource. Protection measures should be shown on the plan to meet this criteria for Superior Design.
- See Appendix “J” of the Zoning Codes that stipulates historic and scenic road attributes.

**11) The proposed street tree caliper is larger than required;**

*Benchmark Guidance:*

- Consider a minimum amount by which to exceed (i.e., inch). Currently the Charles County Road Ordinance requires a minimum 1 ½” street tree caliper; therefore, a 2” street tree caliper is currently considered as meeting this criterion.

**12) The proposed development includes vehicle or pedestrian inter-parcel connections to adjacent neighborhoods or connecting to existing vehicle or pedestrian facilities;**

*Benchmark Guidance:*

- An off-site inter-connection analysis and public road connection analysis should be done prior to project conceptual design work if it is desirable to use these connections.

**13) Loop roads are provided within the proposed development; and**

*Benchmark Guidance:*

- A typical response states to this item is that it is not applicable because minimization of impacts and preservation of environmental features has been given priority over the use of loop roads and no loop roads are proposed.
  - The goal is to have projects that have a neighborhood street network and not just a single road that dead-ends. If loop roads are not possible, staff would consider other road intersections or connections to meet the intent of these criteria.



**14) The proposed development minimizes the use of cul-de-sacs and any islands within proposed cul-de-sacs are landscaped.**

*Benchmark Guidance:*

- *A typical response states to this item is that cul-de-sacs are proposed due to the topography and environmental resources present on the site.*
  - *The goal is to have projects that have a neighborhood street network and not just an entrance with cul-de-sacs. Streets that connect build a stronger sense of community, enabling greater connectivity for automobiles and pedestrians.*

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B. **Development District Project Criteria:** A development project that is superior in design demonstrates optimal land use planning and contains a combination of the following elements, which exceed the requirements under the Base Zone Regulations (Article VI):

**1) Open space that is integrated into the neighborhood as urban parks or pocket parks and open space maintenance responsibilities are clearly defined;**

*Benchmark Guidance:*

- *Useable open spaces will be located in areas that are visible to the entire community as focal points and not hidden behind houses, and will include both active play space and passive neighborhood spaces, as a benchmark for superior design, in accordance with Section 4.8.3 of the Architectural and Site Design Guidelines and Standards (A.S.D.G.S.).*

**2) The Forest Conservation design exceeds the County's and the Chesapeake Bay Critical Area Program requirements, including planting and mitigation standards;**

*Benchmark Guidance:*

- *Exceed requirements by 10% or greater to qualify. Forest preserved to meet other requirements of the Zoning Ordinance and Forest Conservation Ordinance, including, but not limited to, mitigation for abandonment of easements, must be subtracted from the calculation of forest preserved when determining whether a project is superior.*

### **3) A mix of housing types;**

*Benchmark Guidance:*

- To discourage the appearance of tract-type housing by requiring a separation of similar designs on neighboring lots throughout the community in accordance with Section 4.4 of the Architectural and Site Design Guidelines and Standards.

### **4) Diverse architectural design types that include such features as:**

#### **a) Garages that are not the most predominant design feature and are setback further from the street than the house frontage;**

*Benchmark Guidance:*

- *For single-family detached homes, the garage setback must exceed the established benchmark of being at least 5' setback from the front façade, either by design or mitigation, which is established in Section 4.5.5.1. of the Architectural and Site Design Guidelines and Standards (A.S.D.G.S.). For single-family attached homes (townhouses), a minimum 2' off-set between each unit must be provided.*

#### **b) Side loaded, or rear loaded garages; and**

*Benchmark Guidance:*

- *Side-loaded or rear loaded garage design options will be submitted for use on all suitable lots, in accordance with Section 4.5.5.1 of the Architectural and Site Design Guidelines and Standards (A.S.D.G.S.). A commitment to providing side or rear loaded garages on 25% (1/4) of the total number of lots is a desired benchmark for superior design.*

#### **c) Front porches which provide an opportunity for residents to interact within the neighborhood.**

*Benchmark Guidance:*

- *Front porch / portico options will be submitted for all single-family house types (attached and detached) within a given community. Front porches / porticos create additional streetscape diversity and distinctive architectural character to individual homes, in accordance with Section 4.6 of the Architectural and Site Design Guidelines and*

*Standards (A.S.D.G.S). A commitment to providing front porches / porticos on 25% (1/4) of the total number of lots is a desired benchmark for superior design.*

- 5) Community gathering facilities, such as a covered pavilion, community bulletin boards, community art or community centers, gardens or other similar amenities;**

*Benchmark Guidance:*

- *These should be shown on plans or located on the plan with a typical detail added to the application.*

- 6) Shared pedestrian and bicycle facilities and bike racks where feasible;**

*Benchmark Guidance:*

- *These should be shown on plans or located on the plan with a typical detail added to the application.*

- 7) Covered bus stops;**

*Benchmark Guidance:*

- *These should be shown on plans or located on the plan with a typical detail added to the application.*

- 8) A trail system within and connecting open space or roads to adjacent properties; or alternatives such as mowed grass or pervious concrete, with improvements such as lighting, street furniture and landscaping, and signage provided at trail heads and along trails;**

*Benchmark Guidance:*

- *The proposed development must include a trail system within open space that either connects the open space to roads or adjacent properties or utilizes alternative materials such as mowed grass or pervious concrete, and signage must be provided at trail heads and along trails to meet the intent of this criterion.*

- 9) The development demonstrates its commitment to environmental stewardship through the use of one or more of the following elements:**

**a) Conservation landscaping;**

*Benchmark Guidance:*

- *Conservation landscaping may include additional stormwater management best management practices (providing additional water quality treatment above the minimum required limits) designed to emulate wetland areas, provided that the conversation landscaping areas are appropriately located adjacent to Forest Conservation easements or RPZ's. . This is implemented with specific conditions of approval and superior design notes for the plat and development services permit.*
  - *Another alternative would be to include at least 25% of lots with yards having conservation landscaping, provided that the conversation landscaping areas are appropriately located adjacent to Forest Conservation easements or RPZ's. . A typical planting plan (or various options planting designs) should be presented for consideration.*

**b) Water re-use;**

*Benchmark Guidance:*

- Required stormwater management best management practices, with the exception of green roofs, will not be considered water re-use mechanisms. Water re-use is only considered qualified only when cisterns and rain barrel systems for water re-use are being proposed without seeking ESD credit. Commitments to water re-use will be included in a condition of approval and superior design notes for the plat and development services permit as well as the individual building permits.

**c) Use of renewable energy, or other energy efficiency measures detailed in HOA covenants for private lots and/or community facilities;**

*Benchmark Guidance:*

- (see definition of renewable energy). If the applicant chooses to utilize renewable energy for this criterion, then renewable energy (i.e. solar power) must be used to provide power for at least one type of community element (i.e. lighting for entrance sign, etc.). If the applicant chooses to utilize energy efficiency measures for this criterion, then it must be demonstrated that

energy efficiency measures will go above and beyond the current industry standard of Energy Star. Further, provisions for renewable energy and/or other energy efficiency measures shall be included in the HOA documents.

**d) Limited or no stream crossings or stream crossings, or**

*Benchmark Guidance:*

- *To be quantified as shown on the plan. A superior design is usually a subdivision that uses no more than one stream crossing. In addition, the overall stream crossing footprint must be minimized, including the use of retaining walls that eliminate graded side slopes. To be marked as non-applicable if no streams are present on the property.*

**e) Disturbance of steep slopes or other environmental features on lots are minimized.**

*Benchmark Guidance:*

- Steep slopes are defined differently based upon whether the project is within or outside of the Critical Area. Within the Critical Area, the Zoning Ordinance requires a variance prior to approval of development over slopes of 15% or more. Outside of the Critical Area, the Subdivision Regulations direct areas of slopes over 25% to be preserved as open space to the extent reasonable, as long as the engineer agrees to use “appropriate engineering measures concerning slope stability, erosion, and resident safety.”
  - A superior design limits any steep slopes on residential lots.
  - Outside of the Critical Area, no more than 10% of the lots less than or equal to one acre in size should include slopes greater than 15%, with no disturbance permitted to these slopes.
  - Other environmental features would include, but not be limited to, the resource protection zone, critical area Buffer, non-tidal wetlands and their state required buffers, Tier II buffers, habitat protection measures approved under a habitat protection plan, which normally allow limited disturbance.
  - A superior design does not include any environmental features on lots less than or equal to one acre in size.

**10) A plan to relocate existing trees to meet some of the landscaping/street tree requirements or street tree caliper provided that is larger than required;**

*Benchmark Guidance:*

- *Consider using the same street tree criteria as for Rural Cluster development (#11) and consider a minimum amount by which to exceed (i.e., inch). Currently the Charles County Road Ordinance requires a minimum 1 ½" street tree caliper; therefore, a 2" street tree caliper is currently considered as meeting this criterion.*

**11) Sidewalks on both sides of the street, which shall be at least five (5) feet in width, where feasible, as determined by the Planning Director;**

*Benchmark Guidance:*

- *Projects with one sidewalk and which also utilize bicycle and trail systems may be considered provided the streets with one sidewalk are only local streets and not collector or arterials.*

**12) Vehicle or pedestrian inter-parcel connections to adjacent neighborhoods or tying into existing vehicle or pedestrian facilities;**

*Benchmark Guidance:*

- *In accordance with Section 4.9 of the Architectural and Site Design Guidelines and Standards (A.S.D.G.S.) the following connectivity criteria should be addressed as a benchmark for superior design. Sidewalks and bikeways should be designed to provide safe and direct access to on site amenities and nearby off site services. A map shall be prepared showing all schools, parks, and shopping areas within a ½ mile radius of the site with the location of all existing and proposed paths/routes within the development and within one mile of the development. Streets should connect to adjoining residential areas whenever possible. Multi-modal circulation systems shall be designed to encourage walking, biking and use of mass transit.*

**13) A grid of interconnected street network with parks or civic uses in or near the center of neighborhoods; and**

*Benchmark Guidance:*

- *Applicable to both 12) and 13): A connectivity index shall be submitted to measure the goal of providing sufficient street routes and mobility options, in accordance with Section 4.9.6. of the Architectural and Site Design Guidelines and Standards (A.S.D.G.S.).*

- *The index is a ratio of the number of street links (road sections between intersections and cul-de-sacs) divided by the number of street nodes (intersections and cul-de-sac heads).*
- *The more links relative to nodes, the more connectivity. Traditional gridiron street networks yield an index of approximately 1.7. Contemporary networks yield about 1.2. An index of 1.4 is a good target for future planning purposes and shall be required as the benchmark requirement for superior design.*

**14) Designated additional guest parking of at least 10% above the number of parking spaces required in Article XX of this Chapter and spread throughout the project. This element applies solely to projects that have townhouses or multi-family housing units.**

*Benchmark Guidance:*

- “Guest” parking areas are parking spaces as defined by the Zoning Ordinance, i.e., “PARKING SPACE -- An area set aside for the parking of one vehicle” and that these spaces cannot be designated on an individual lot, but rather they need to be accessible to all visitors/guests.
  - Designated guest parking areas cannot be amended at time of plat and/or development services permit before revising the preliminary subdivision plan.
  - Designated guest parking areas need to be constructed using porous pavement.